

SOLAR
PANEL
(10W)

EMERGENCY BATTERY
(100AH)

MAIN RANGE LT
VOLTAGE MONITOR
(120VAC)

EMERGENCY SWITCH BOX-AC
(ESB-AC)

EMERGENCY
RANGE LT

RL-14, 1.9A

CG-6P

F L -

#12

CG-181

F L S S + -

DLC

NOTE 5

#18/2

2 - #12 AWG in 3/4" PVC Conduit

3 - #12 AWG in 3/4" PVC Conduit

NOTES:

- RANGE LANTERN, LAMPS, RHYTHM, AND BEAM WIDTH DETERMINED BY INTENSITIES RECOMMENDED BY THE RANGE DESIGN PROGRAM.
- NORMALLY-CLOSED RELAY IN ESB IS HELD OPEN WHEN MAIN RANGE LIGHT OPERATING NORMALLY; WHEN MAIN SIGNAL VOLTAGE FALLS BELOW 36VAC, RELAY DEENERGIZES, TURNING ON THE EMERGENCY RANGE LIGHT.
- BATTERY AND PANEL SIZED FOR CONTINUOUS TRICKLE-CHARGE AND UP TO FOUR DAYS EMERGENCY LIGHT OPERATION IF MAIN POWER FAILS.
- WIRE SIZED FOR MAX ANTICIPATED LOAD. WIRES MAY BE RESIZED ONLY IF LOAD & CHARGING CIRCUIT VOLTAGE DROPS DO NOT EXCEED 0.1V & 0.6V RESPECTIVELY.
- STANDARD SOLAR PANEL COMES WITH 12FT LEAD #18AWG PIGTAIL. IF NO LTB AND PANEL IS CLOSE TO BATTERY, CONNECT PIGTAIL DIRECTLY TO BATTERY.
- ALL WIRE RUNS SHALL BE ENCLOSED IN APPROPRIATELY SIZED RIGID OR LIQUID-TIGHT FLEX CONDUIT AS INDICATED TO FORM A WEATHERTIGHT SYSTEM AND PROTECT ELECTRICAL COMPONENTS FROM THE ELEMENTS.

POINT TO POINT WIRE RUNNING LIST

FROM	WIRE SIZE (AWG)	MAX DISTANCE (FT)	TO
SOLAR PANEL (+)	18	12	EMERGENCY BATTERY (+)
SOLAR PANEL (-)	18	12	EMERGENCY BATTERY (-)
EMERGENCY BATTERY (+)	12		ESB-AC, TB2, EMERG BATT (+)
ESB-AC, TB2, CG-181 (+)	12	15	RANGE LT, CG-181 (+)
EMERGENCY BATTERY (-)	12	15	RANGE LT, CG-181 (-)
RANGE LT, CG-181 (F)	12		RANGE LT, CG-6P (F)
RANGE LT, CG-181 (L)	12		RANGE LT, CG-6P (L)
RANGE LT, CG-181 (-)	12		RANGE LT, CG-6P (-)
PHOTORESISTOR, 1ST LEAD			RANGE LT, CG-181 (S)
PHOTORESISTOR, 2ND LEAD			RANGE LT, CG-181 (S)

BILL OF MATERIALS

ITEM	TYPE	SOURCE OF SUPPLY	QUANTITY
SOLAR PANEL (10W)	G-SEC QPL 401A	ELC	NOTE 3
EMERGENCY SWITCH BOX-AC	ESB-AC	G-SEC	1
PHOTORESISTOR	TYPE L	ELC	1
RANGE LT, RL-14	CARLISLE & FINCH	ELC	NOTE 1
12VDC FLASHER	CG-181	ELC	1
12VDC LAMPCHANGER	CG-6P	ELC	1
LAMPS	12VDC, 1.9A	ELC	6
EMERG BATTERY, LEAD ACID 100AH	S2000	DELCO	NOTE 3

A	12/03	JTG	ADDED CONDUIT AND NOTE 6.	KMD
REV.	DATE	APPR.	DESCRIPTION	BY
DESIGNED: STN			U.S. COAST GUARD HEADQUARTERS CIVIL ENGINEERING STANDARD AID TO NAVIGATION OPTIONAL EMERGENCY RANGE LIGHT (FOR 120VAC MAIN LIGHT)	
DRAWN: STN				
TRACED:				
CHECKED: KA/JTG				
REVIEWED BY:				
H.R. CLEVELAND				
G-SEC-2A				
REVIEWED BY:				
L.E. JAEGER				
G-SEC-2				
REVIEWED BY:			APPROVED:	DATE
			CAPT J.A. RAUCH	5/19/97
			CHIEF, OFFICE OF CIVIL ENGINEERING	
UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES. TOLERANCES: DIM. ANG.			DRAWING NUMBER	
			130505	
			SCALE: NONE	REV. A
			SHEET 1 OF 1	

PLOTTING SCALE: